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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,287	08/31/2004	Henricus Marinus Josephus Hikspoors	NL 020186	6744

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
RUDE, TIMOTHY L	
ART UNIT	PAPER NUMBER
2871	
MAIL DATE	DELIVERY MODE
09/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,287	HIKSPOORS ET AL.	
	Examiner	Art Unit	
	Timothy L. Rude	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Upon consideration of Appellant's Appeal Brief filed 26 April 2007, the final rejection is withdrawn and prosecution is reopened.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al., (Swanson), USPAT 5,889,567 in view of Weber et al., (Weber), USPAT 6,025,897 and Moon et al., (Moon), USPAT 6,882,386, and Edlinger et al (Edlinger) USPAT 7,070,280 B2.

Swanson discloses and shows in Fig. 19, a projection device for projecting an image comprising a light source (305) for emitting light, a transmissive LCD projection subsystem and a projection means (360) for projecting the image, the projection subsystem comprising:

- a waveguide integrator (330) for guiding light from an entrance to an exit, the inner entrance surface of the integrator being coated with a reflective material (322) and having a hole (324) for coupling light emitted from the light source into the integrator; and

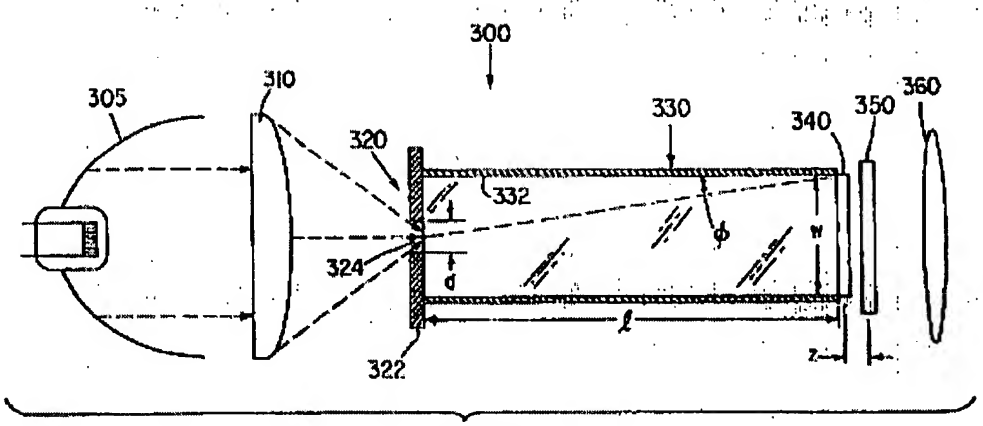

FIG 19

- a transmissive LCD (350) provided at the exit side of the integrator.

Swanson differs from the claimed invention because he does not explicitly disclose the claimed reflective polarizer at the exit surface of the integrator.

Weber discloses a display device having a reflective polarizer (12) disposed between an LCD (18) and at the exit surface of the integrator (24) (Fig. 1). He further discloses that such an structure is advantageous since it develop adequate brightness and contrast under both ambient and backlight illumination (col. 1, lines 61-63).

Weber is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ a reflective polarizer between an LCD and the exit surface of an integrator.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the projection device of Swanson by employing a reflective polarizer between the LCD (350) and the exit surface of the integrator so that adequate brightness and contrast can be obtained under both ambient and backlight condition, as per the teachings of Weber.

Lacking is the limitation such as the LCD is integrated with a reflective color filter array.

Moon discloses a display device wherein an LCD integrated with a reflective color filter (12) made of cholesteric liquid crystal polymer (applicant's reflective color filter array) is provided at the exit surface of a light guide (40) (applicant's waveguide integrator) (Fig. 1). He further discloses that by employing a cholesteric color filter in an LCD device the luminance can be improved (col. 2, lines 5-7).

Moon is evidence that ordinary workers in the art would find a reason, suggestion or motivation to employ a reflective color filter array in an LCD device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the projection device of Swanson when modified by Weber by employing a reflective color filter array in the LCD to improve luminance.

Also Lacking is a reflective coating on the inner entrance surface.

Edlinger teaches the use of a reflective inner entrance surface (see ray traces at 13c in Figure 4) that render obvious to one of ordinary skill the improved utilization of light (better light efficiency) due to a reflective inner entrance surface as achieved by coating or other means [col. 4, line 19 through col. 5, line 65].

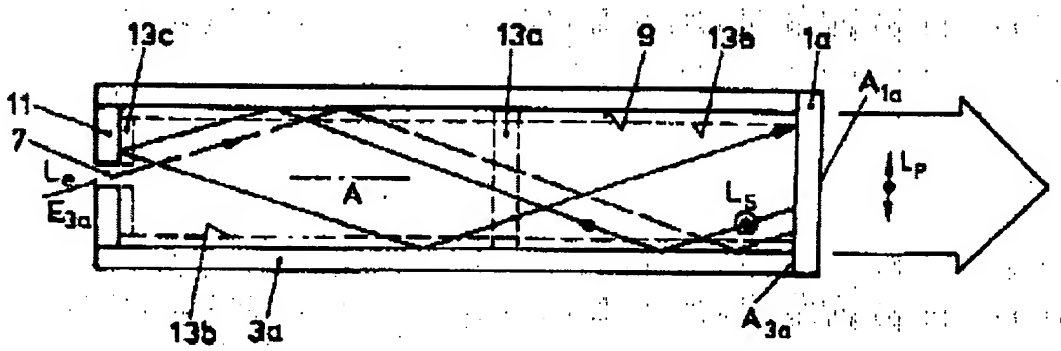

FIG.4

Edlinger is evidence that workers of ordinary skill in the art would find the reason, suggestion, or motivation to add a reflective inner entrance surface (see ray traces at 13c in Figure 4) that render obvious to one of ordinary skill the improved utilization of light (better light efficiency) due to a reflective inner entrance surface as achieved by coating or other means [col. 4, line 19 through col. 5, line 65].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Swanson with a reflective inner entrance surface (see ray traces at 13c in Figure 4) that render obvious to one of ordinary skill the improved utilization of light (better light efficiency) due to a reflective inner entrance surface as achieved by coating or other means [col. 4, line 19 through col. 5, line 65].

Accordingly, claims 1,2 and 4 would have been obvious.

As to claims 3 and 7, it is clear from Fig. 1 of Moon that the reflective color filter array having a diagonal configuration and is located at the inner surface of one of the substrates of the LCD and between the polarizer and the LCD.

As to claim 5, Swanson shows in Fig. 19 that the waveguide integrator further comprises retardation film (340) for changing the polarization of the polarized light back into the integrator.

As to claim 6, making the surface of the LCD outside the visible window reflective to obtain a reflective LCD is common and known in the art and thus would have been obvious.

As to claim 8, Swanson also discloses that the integrator (330) is made of higher refractive index material for reflecting light (col. 18, lines 5-7).

As to claim 10, the method of projecting an image merely discloses the steps of forming the projection device and since each element must be formed to make the device, the method would have at least been obvious in view of the device.

Response to Arguments

Applicant's arguments filed on 26 April 2007 have been fully considered but they are not persuasive.

Applicant's ONLY substantive arguments are as follows:

(1) Regarding base claims 1 and 10, the applied prior art does not teach the reflective inner coating.

(2) Dependent claims are allowable because they directly or indirectly depend from an allowable base claim.

Examiner's responses to Applicant's ONLY arguments are as follows:

(1) It is respectfully pointed out that Edlinger is newly applied to render obvious the claimed reflective inner coating.

(2) It is respectfully pointed out that in so far as Applicant has not argued rejection(s) of the limitations of dependent claim(s), Applicant has acquiesced said rejection(s).

Any references cited but not applied are relevant to the instant Application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy L Rude
Examiner
Art Unit 2871

tlr

9/17/07